

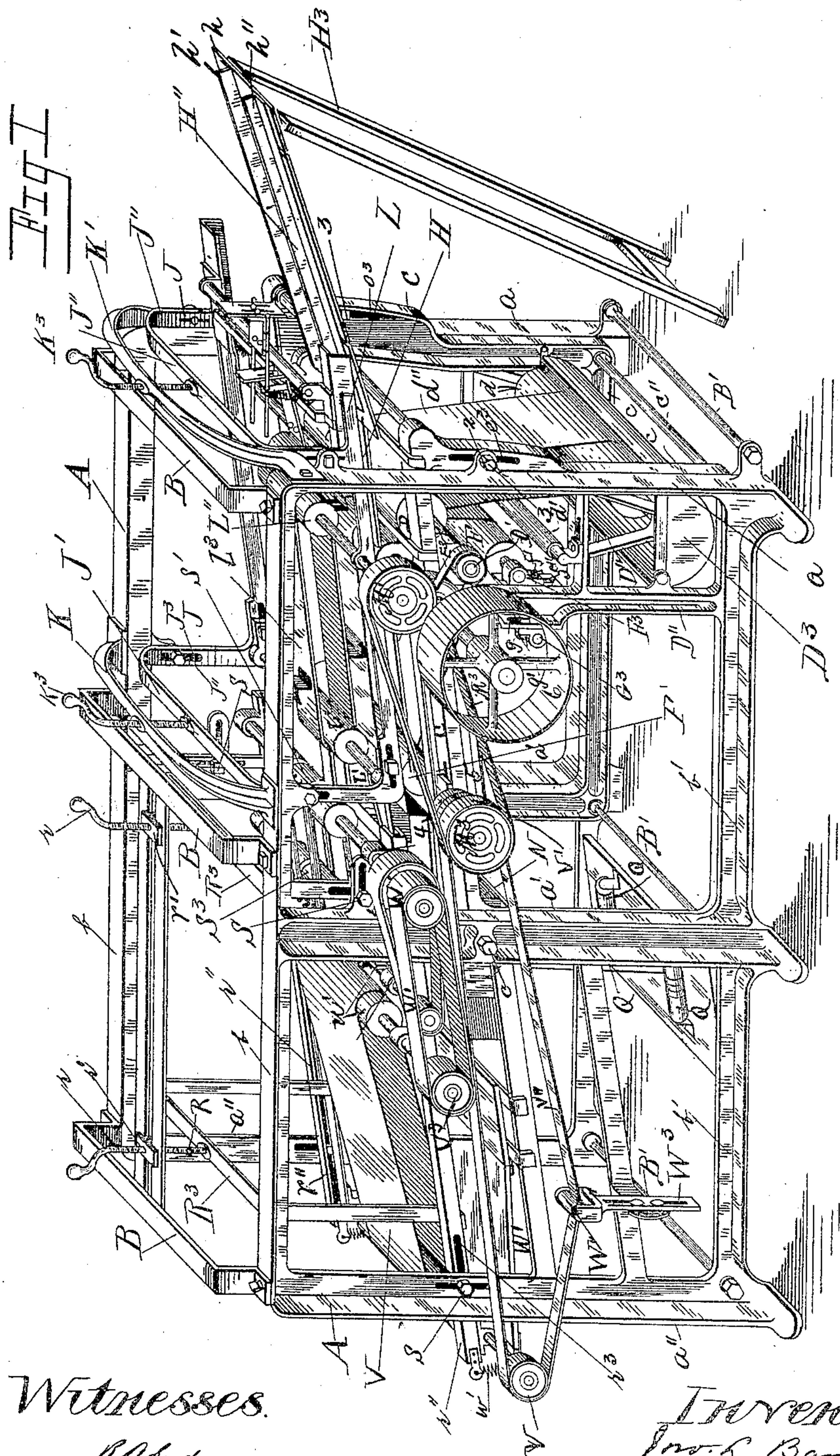
(No Model.)

6 Sheets—Sheet 1.

J. L. BARKEY.  
CAN LABELING MACHINE.

No. 604,691.

Patented May 24, 1898.



Witnesses.

R. Sydney.  
W. C. Westwood

Inventor  
Jno. L. Barkey  
by C. V. Riches  
his attorney



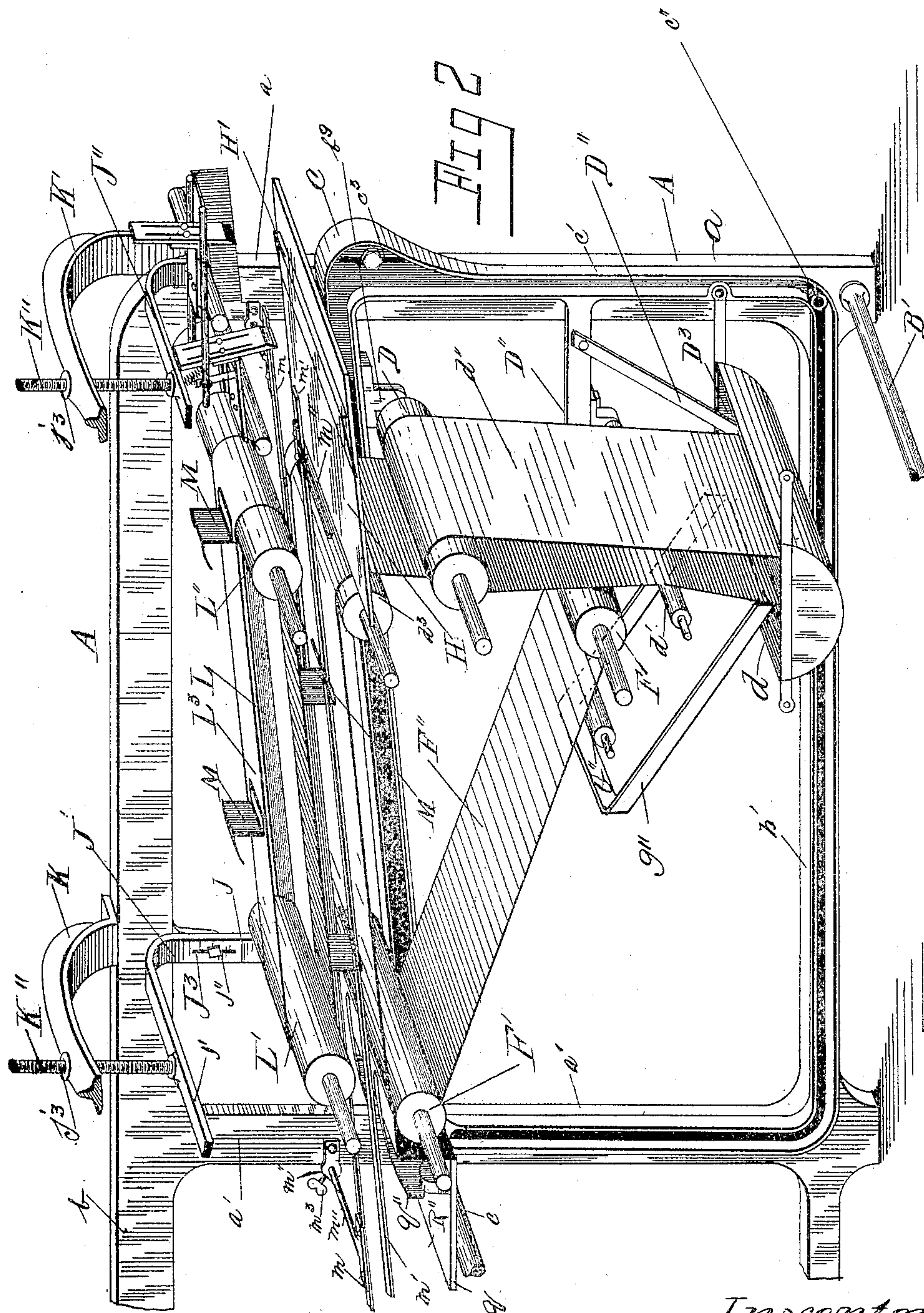
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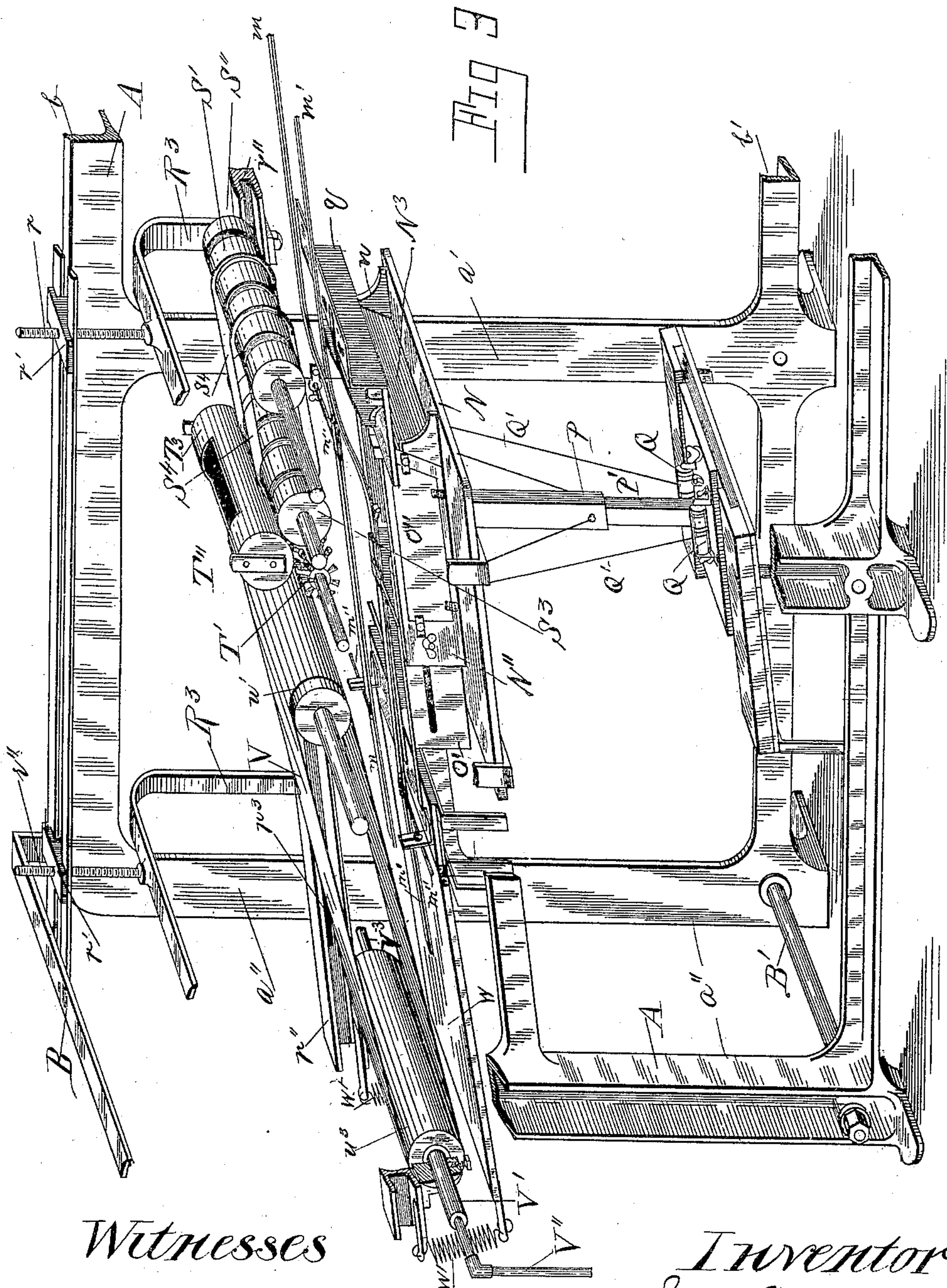
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6 Sheets—Sheet 3.

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Witnesses

*R. Sydney*  
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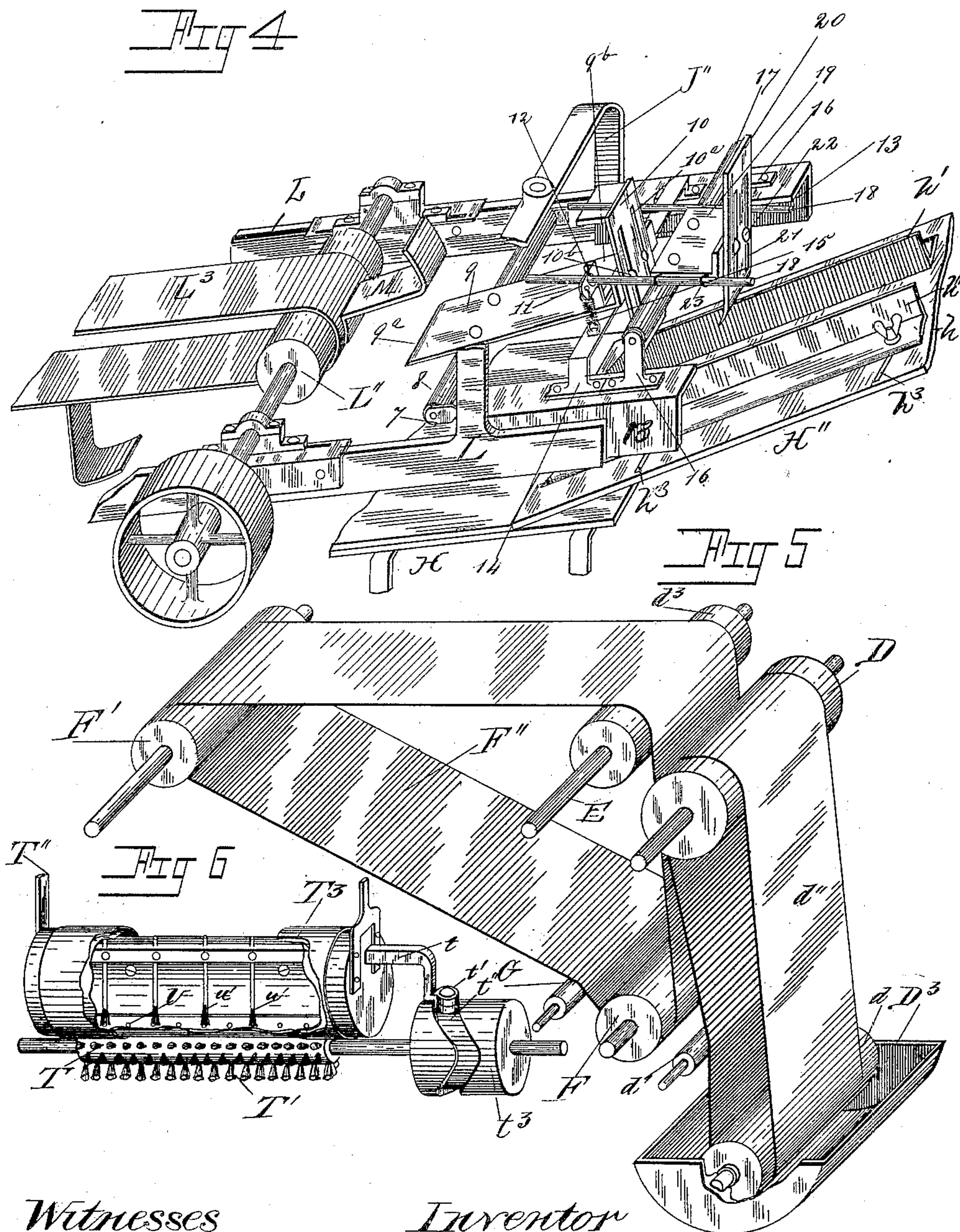
(No Model.)

6 Sheets—Sheet 4.

J. L. BARKEY.  
CAN LABELING MACHINE.

No. 604,691.

Patented May 24, 1898.



*Witnesses*

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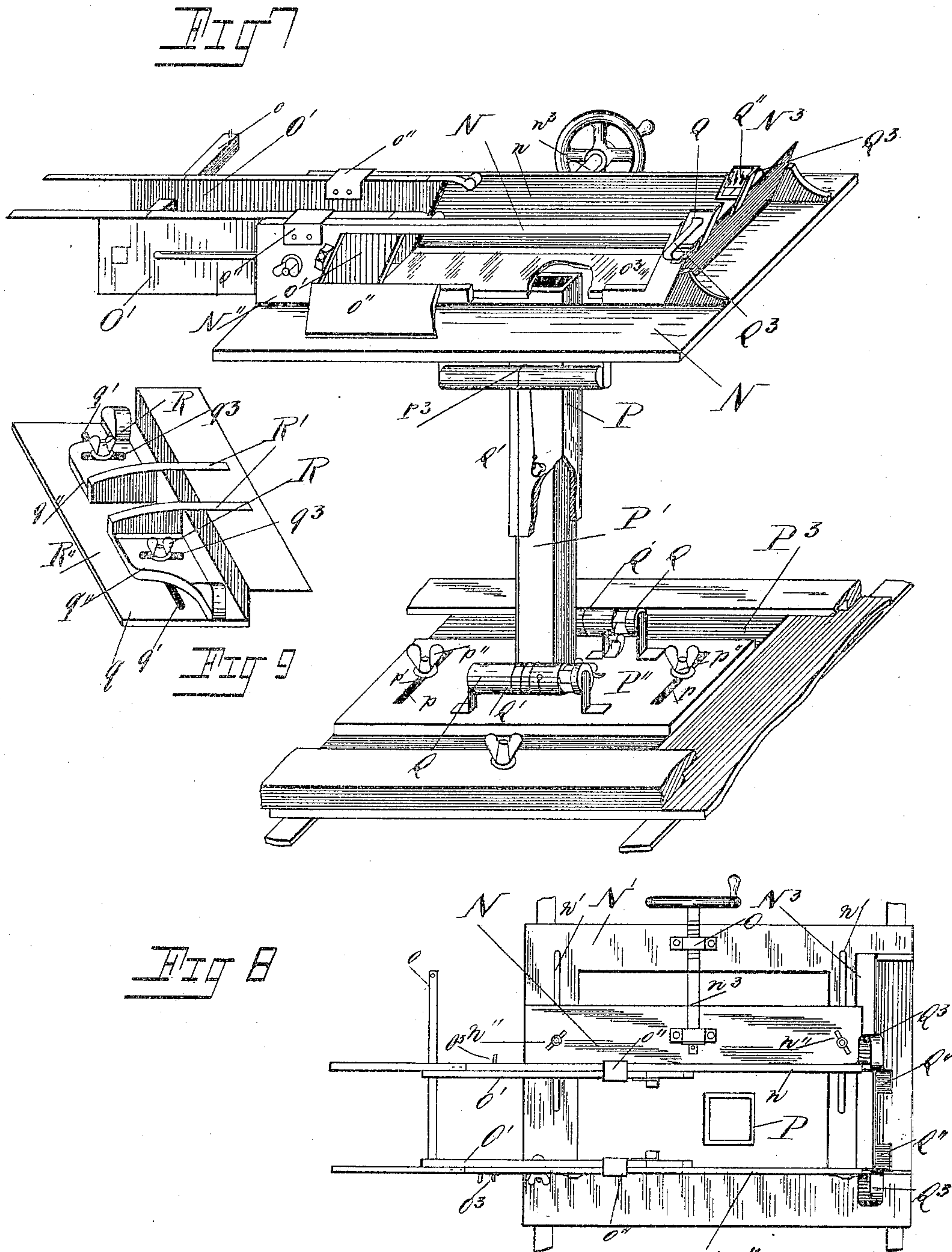
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6 Sheets—Sheet 5.

J. L. BARKEY.  
CAN LABELING MACHINE.

No. 604,691.

Patented May 24, 1898.



Witnesses.

*W. A. Newcomb*  
*W. A. Newcomb*

Inventor: *N''*

*John Barkey*  
by *C. N. Riches*  
his Attorney.

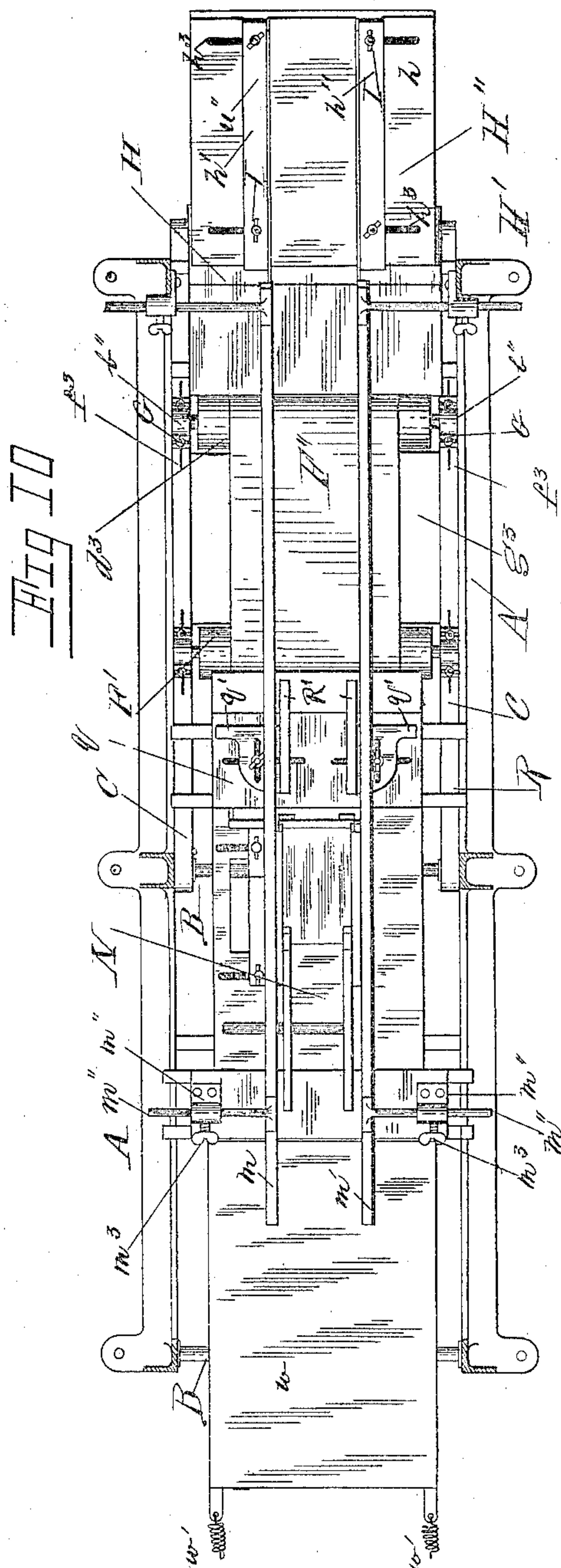
(No Model.)

6 Sheets—Sheet 6.

J. L. BARKEY.  
CAN LABELING MACHINE.

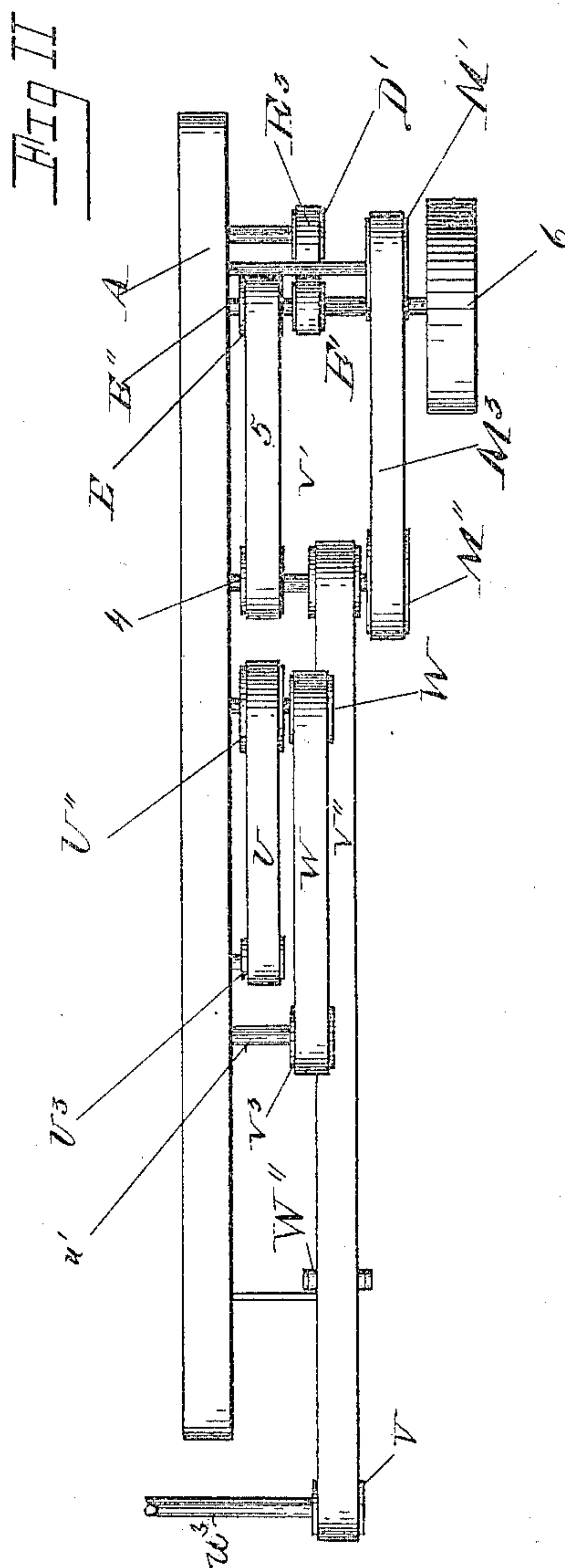
No. 604,691.

Patented May 24, 1898.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN L. BARKEY, OF TORONTO, CANADA.

## CAN-LABELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 604,691, dated May 24, 1898.

Application filed February 18, 1897. Serial No. 624,012. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. BARKEY, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Can-Labeling Machines; and I hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to certain new and useful improvements in can-labeling machines; and the object of the invention is to so construct the machine that the parts can be readily adjusted to the exact size of the can or cans to be labeled and to so arrange these parts that they will properly gum each can during its transit to the label-holder, permit the can to receive a label from the label-holder and then gum the lap, afterward pressing the label on the can, lapping each, and then delivering the can from the machine, the whole device being hereinafter more fully set forth, and more particularly pointed out in the claims.

In the drawings, Figure 1 represents a perspective view of the complete machine. Fig. 2 is a perspective view of the front half of the machine, showing one of the side frames removed to illustrate the pasting apparatus. Fig. 3 is a similar view of the rear half of the machine to illustrate the labeling apparatus. Fig. 4 is a perspective view of the apparatus for controlling the feed of the cans to the machine. Fig. 5 is a perspective view of the can-pasting apparatus. Fig. 6 is a similar view of the apparatus for pasting the lap of the label. Fig. 7 is a perspective view of the label-holder. Fig. 8 is a plan view of the same. Fig. 9 is a perspective view of the platform interposed between the can-pasting apparatus and the label-holder. Fig. 10 is a plan view of the raceway and adjusting mechanism. Fig. 11 is a plan view of the driving-gear.

Like letters and numerals of reference refer to like parts throughout the specification and drawings.

A A represent the sides of the main frame. Each side A consists of three standards  $a a'$ , a top bar  $b$ , and a bottom bar  $b'$ . The sides A A are united at the top by means of braces B B and at the bottom by stay rods or bolts B'.

C C represent two side bars, one located

contiguous to each side frame A and one end of each of which is pivotally connected to the middle of the standard  $a'$ , adjacent to it, by means of a pivot-bolt  $c$ . The head of each of the side bars C C is provided with a downwardly-extending arm  $c'$ , coupled by a stay-bolt  $c''$ . Formed in each of the arms  $c'$  is a curved slot  $c^3$ , the curvature of which is struck with the bolt  $c$  as its center. Connected to each of the standards  $a a'$  is a lug 2, and passing through the lugs and slots  $c^3$  is a bolt fitted with a thumb-nut 3. The side bars C C support the head of the raceway for the cans and part of the pasting apparatus, and the purpose of the pivot-bolt and the adjusting-screw is to vary the inclination of the side bars in order that the grade of the raceway may be increased or diminished to increase or diminish the rapidity of the movement of the cans.

D represents a drum journaled in longitudinally-movable bearings  $b^3$ , (see Fig. 2,) connected to the side bars C C contiguous to the head of the machine, and D' represents a pulley rigidly mounted on the spindle of the drum D.

D'' D'' represent two hangers suspended from the under side of the side bars C C vertically below the drum D, and D<sup>3</sup> represents a paste-box carried by the hangers D'' D''.

$d$  represents a drum journaled in bearings in the paste-box D<sup>3</sup>, and  $d'$  represents an idler journaled in the hangers D'' D'' intermediate the drums D  $d$ .

$d''$  represents a paste-belt passing around the drums D  $d$  and pressing against the idler  $d'$ .

$d^3$  represents a drum journaled in bearings  $b''$ , (see Fig. 10,) mounted on the side bars C C contiguous to the drum D.

E E' represent two pulleys mounted on the spindle E'' of the drum  $d^3$ . Passing around the pulley E' and around the pulley D' is a belt E<sup>3</sup> for the purpose of transmitting motion from the pulley E' to the pulley D'.

F represents a drum journaled in vertically-adjustable bearings F<sup>3</sup>, connected to the hangers D'' D'' vertically below the drum  $d^3$ , and F' represents a drum journaled in the side bars C C contiguous to the standards  $a' a'$ .

F'' represents a paste-belt passing around the drums  $d^3$  F F' and rubbing against the



paste-belt  $d''$ . The purpose of the paste-belt  $d''$  is to convey the paste from the box  $D^3$  and transmit it to the paste-belt  $F''$ . By this means the outer surface only of the belt  $F''$  is covered with paste, and consequently the trouble which would ensue from the paste getting between the drums and the inner face of the belt is completely avoided. Each of the bearings  $F^3 F^3$  for the drum  $F$  is provided with bolts  $f$  and thumb-nuts  $f'$ , the bolts  $f$  passing through vertical slots  $f''$ , formed in the hangers  $D'' D''$ . By means of the slots  $f''$ , bolts  $f$ , and thumb-nuts  $f'$  the bearings  $F^3$  can be moved vertically in either direction to increase or diminish the tension on the belt  $F''$ .

$f^3 f^3$  represent longitudinal slots formed in the side bars  $C C$  at or near the head of the machine.

$G G$  represent bolts passing through the bearings  $b'' b''$  and slots  $f^3 f^3$ , each of the bolts  $G G$  being provided with a thumb-nut  $G'$ . By means of the slots  $f^3$ , bolts  $G$ , and thumb-nuts  $G'$  the bearings  $b'' b''$  can be moved nearer to or farther away from the drum  $D$ , thus adjusting the bearings  $b''$ . The belt  $F''$  will be brought closer to or farther from the paste-supply belt  $d''$ , so that more or less paste will be taken therefrom. The closer the vertical run of the belt  $F''$  is adjusted to belt  $d''$  the greater the amount of paste it will take up. The idler  $d'$  distributes the paste evenly over the belt  $d''$ , removes the surplus paste from the belt, and causes its return to the paste-box  $D^3$ . The even distribution of the paste over the face of the belt  $d''$  also causes an even distribution of the paste over the face of the belt  $F''$ . To provide, however, for a practically perfect distribution of the paste across the face of the belt  $F''$ , the machine is provided with an idler  $G''$ , mounted in vertically-adjustable bearings  $G^3$ , secured to the hangers  $D'' D''$ . To secure the vertical adjustment of the bearings  $G^3$ , in each bearing is formed a vertical slot  $g$ , through which passes a bolt fitted with a thumb-nut  $g'$ . By means of the slots, bolts, and thumb-nuts the bearings  $G^3$  can be moved vertically in either direction to raise or lower the idler  $G''$ , as required, to cause the idler to respectively diminish the pressure on the belt  $F''$ , the increased pressure removing all surplus paste from the belt. To secure the surplus paste removed by the idler  $G''$ , a chute  $g''$  is located below the idler  $G''$ , descending into the paste-box  $D^3$ .

$g^3$ , Fig. 10, represents a table carried by the side bars  $C C$  to form a support for the belt  $F''$  between the drums  $d^3$  and  $F'$ . The purpose of the table  $g^3$  is to firmly support the cans during their passage over the belt  $F''$ .

$H$  represents a platform connected to the top of the side bars  $C C$  at the head of the machine. The foot of the platform  $H$  overlaps the top of the drum  $d^3$  and is adapted to deliver the cans on the paste-belt  $F''$ , and  $H'$

represents an inclined step mounted on the platform  $H$ .

$H''$  represents a chute located at the head of the machine, the lower end of which rests against the end of the step  $H'$ , which serves as a stop to prevent the forward movement of the chute  $H''$ .

$H^3$  represents a leg hinged to the under side of the chute  $H''$  to support the outer end of the chute. By means of the leg  $H^3$  the inclination of the chute  $H''$  can be varied to vary the speed of descent of the cans as they are delivered on the platform  $H$ . The chute  $H''$  consists of a bottom  $h$  and two movable sides  $h' h''$ , respectively. Formed in the bottom  $h$  are two lateral slots  $h^3$ , and extending through the slots and through the sides  $h' h''$  are bolts fitted with thumb-nuts  $I$ . By means of the slots, bolts, and thumb-nuts the sides can be moved nearer to or farther away from each other. These sides serve as guides for the cans fed to the machine, and the object of moving them to or away from each other is to adjust the chute to the size of the cans being fed to the machine—that is to say, the smaller the can that is being fed through the chute the nearer the sides will be together and the larger the can the farther they will be away from one another, or, in other words, the sides can be moved into such a position that the ends of the can will fit snugly and easily between them. The chute  $H''$  is separable from the machine and when not in use can be folded against the leg and set aside.

$J' J''$  represent two vertically-movable hangers connected to the frame of the machine, the hanger  $J''$  being located at the head of the machine and the hanger  $J'$  in close proximity to the standards  $a' a'$ . Each hanger  $J' J''$  consists of two uprights  $j$ , connected at the top by a cross-piece  $j'$ . Formed in each of the uprights  $j$  is a vertical slot  $J^3$ , through which passes a bolt  $j''$ , rigidly connected to a lug depending from the top bars  $b b$ . Each of the bolts  $j''$  is provided with a head to overlap the sides of its respective slot  $J^3$ . The purpose of the bolts  $j''$  is to guide the vertical movement of the hangers, and the object of the vertical movement on the part of the hangers is to provide for the vertical adjustment of the parts carried by the hangers to the size of the cans being fed by the machine.

$K K'$  represent two cross-arms connected to the top of the top bars  $b b$ , the cross-arm  $K$  being located vertically over the hanger  $J'$  and the cross-arm  $K'$  vertically over the hanger  $J''$ . Connected to the cross-piece  $j'$  of each of the hangers is an adjusting-screw  $K''$ , each of which passes through a screw-threaded collar  $j^3$  in its respective cross-arm. Each of the adjusting-screws  $K''$  is provided with a crank  $K^3$ . The purpose of the adjusting-screws  $K''$  is to vertically adjust the position of the hangers  $J' J''$ .

$L L$  represent two side bars connected to the uprights  $j$  of the hangers. The side bars



L L are preferably vertically above the side bars C C and at such an inclination as to meet the requirements of the machine.

L' represents a drum journaled in bearings connected to the side bars L L and contiguous to the standards  $a'$ .

L'' represents a drum journaled in bearings mounted on the side bars L contiguous to the head of the machine.

L<sup>3</sup> represents a belt passing around the drums L' L''. Connected to the outer face of the belt L<sup>3</sup> are a series of L-shaped arms M.

M' represents a pulley mounted on the spindle of the drum L'', and M'' represents a pulley mounted on the spindle of the drum F'. Passing around the pulleys M' M'' is a belt M<sup>3</sup>, by means of which motion is transmitted from the pulley M'' to the pulley M'.

$m$  represents a guide-rail adjustably connected to the standards  $a a'$  at one side of the machine, while  $m'$  represents a movable guide-rail opposed to and parallel with the rail  $m$ . The rails  $m m'$  are located above the paste-belt F'', and the purpose of these rails is to prevent any side motion on the part of the can during its travel across the paste-belt to the label-receptacle. Connected to the middle and to each end of the guide-rail  $m'$  is an arm  $m''$ , slidably held in suitable brackets connected to the standards  $a a' a''$  at the adjacent side of the machine. Mounted on each of the arms  $m''$  are adjusting-screws  $m^3$ , by means of which the arms and the rail can be moved in either direction and then locked in the set position. By means of this construction the rail  $m'$  can be moved to or away from the rail  $m$  to respectively increase or diminish the distance between the rails in order that the rails may be fitted to the size of the cans being fed to the machine. The rails  $m m'$  are sufficiently close to the paste-belt F'' to receive and prevent the displacement of cans of the smallest size and sufficiently remote from the paste-belts to prevent the lateral displacement of cans of the largest size. By means of these rails the can is guided in a straight course from the time of its delivery on the platform H until it has passed from the machine.

N represents the label-holder located between the drum F' and the foot of the machine. The label-holder consists of an open bottom N', a side N'', rigidly connected to the bottom N', an end N<sup>3</sup>, connected to the head of the side N'', and a movable side  $n$ , opposed to the side N''.

$n' n'$  represent two lateral slots formed one at each end of the bottom N', and  $n'' n''$  represent two guide-pins connected to the movable side  $n$  and extending one through each of the slots  $n'$ . By means of the guide-pins  $n''$  and slots  $n'$  the side  $n$  is caused to move in a plane parallel with the side N''.

$n^3$  represents an adjusting-screw connected to the movable side  $n$  and working through a collar O, connected to the bottom N'. By means of the screw  $n^3$  and collar O the side  $n$

can be moved laterally to or away from the side N''. The purpose of making the side  $n$  laterally movable is to adjust the sides of the box to the labels contained within it. The end N<sup>3</sup> of the label-holder is downwardly inclined in order that the topmost label will be in advance of those below it to prevent the can when receiving its respective label displacing any of the remaining labels.

O' O' represent two telescopic sides within the label-holder and connected one to each of the sides N''  $n$ . The head of each of the telescopic sides O' O' is sloped to correspond with the slope of the end N<sup>3</sup> in order that the head of the telescopic sides O' O' will be parallel with the head of the label-holder.

O'' O'' represent L-shaped plates connected one to the top of each of the telescopic sides O' O' and overhanging the outer face of the sides N''  $n$ .

O<sup>3</sup> O<sup>3</sup> represent two sets of stops fixed to the top of the sides of the label-holder to limit the movement of the telescopic sides O' O'. The purpose of the telescopic sides is to provide an adjustable foot for the label-holder in order that the label-holder may retain the labels in a compact mass.

$o$  represents an arm rigidly connected to the foot of one of the sides O' and extending through an opening in the opposite side O'. The purpose of the arm  $o$  is to form a slide for the movable plate when being laterally adjusted with its adjacent side  $n$ .

$o'$  represents an opening formed in the side N'' for the admission of the labels to the label-holder, and  $o''$  represents a door or lid hinged to the said side and adapted to close the said opening.

$o^3$  represents a false bottom for the label-holder. The false bottom is vertically movable within the label-holder and is connected to the top of a sleeve P, sliding vertically on a column P', rigidly connected to a movable plate P'', mounted on the base P<sup>3</sup>. Each end of the plate P'' is provided with lateral slots  $p p$ , through which extend bolts  $p'$ , connected to the base P<sup>3</sup> and fitted with thumb-nuts  $p''$ . By means of this construction the plate P'' can be moved laterally in either direction to bring the column P', sleeve P, and false bottom O<sup>3</sup> vertically below the middle of the bottom of the label-holder when the movable side  $n$  has been adjusted. By means of this construction the false bottom O<sup>3</sup> can be placed vertically below the middle of the label-holder to properly sustain the labels contained within it.

$p^3 p^3$  represent two idlers connected to the under side of the bottom N' and located one at each side of the sleeve P.

Q Q represent two spring-actuated rollers (similar in construction to a Hartshorn window-shade roller) connected to the plate P'' and located one on each side of the column P'.

Q' Q' represent two cords or chains, one end of each of which is connected to its respective roller Q, while the opposite end is



passed around its respective idler  $p^3$  and connected to the sleeve P. By means of the spring-actuated rollers Q Q and cords Q' the sleeve P and false bottom  $O^3$  are gradually raised as the labels are taken up by the cans passing through the machine.

Q'' Q'' represent two vertically-movable angle-plates located at the head of the label-holder, adapted to be depressed by the can when receiving its respective label and to be returned to their normal position by springs  $Q^3 Q^3$  after the weight of the can has been removed from them. The purpose of the plates Q'' is to receive the corners of the labels and to keep the labels in their proper relation to the label-holder. The plates Q'' act thus by reason of receiving within their inner angles the forward corners of the pile of labels, so that disarrangement thereof is prevented. Moreover, as these plates Q'' are moved up by their springs they tend to separate the edges of the labels, and thus prevent them from adhering one to the other.

By reference to the drawings it will be noticed that the rails  $m m'$  between the drum F' and the head of the label-holder are curved downwardly in order that they will bear the same relative position to the label-holder as they do to the paste-belt. The space between the head of the label-holder and the drum F' is occupied by a platform  $q$ . Formed in the platform  $q$  are two lateral slots  $q' q'$ , and mounted on the platform are two movable plates  $q'' q''$ , located one above each of the slots  $q'$ . Formed in each of the plates  $q'' q''$  is a longitudinal slot  $q^3$ , and passing through the slots  $q' q^3$  are adjusting-bolts fitted with thumb-nuts R. By means of the adjusting-bolts, thumb-nuts, and slots the plates  $q''$  can be moved either laterally or longitudinally to bring them nearer the sides of the platform  $q$  or the edge R'' of the platform adjacent to the labels. Carried by each of the plates  $q''$   $q''$  is an inclined track R'. The forward ends of the tracks R' R' are in substantially the same plane as the top of the paste-belt and are adapted to receive the cans when delivered from the paste-belt. The ends of the tracks R' R' adjacent to the label-holder are slightly above the level of the labels in order that the can will have a sharp descent on the labels when delivered from the tracks. The purpose of the tracks is to keep the can from the platform, and thus prevent the paste being wiped from the can. The purpose of making the tracks R' R' laterally adjustable is to accommodate the tracks to the width of the can, and the purpose of making them longitudinally adjustable is to cause the delivery of the can at the adjacent end of the labels. To explain this latter statement, we will assume that a medium-sized can is going through the machine. In this case the tracks R' R' will be in the position shown in Fig. 9 of the drawings. In the event of a larger can being put through the machine the tracks will be

moved farther away from the edge R'' of the platform and spread wider apart. In the event of a smaller can going through the machine the tracks R' will be moved nearer the edge R'' and brought closer together. By this construction the tracks R' can be adjusted laterally to any sized can within the range of the machine and to deliver the can exactly on the edge of the labels, enabling the can to pick up the label at the proper point.

R<sup>3</sup> R<sup>3</sup> represent two sets of hangers located one contiguous to each of the standards  $a' a''$  and suitably guided vertically by the side frames A A.

$rr$  represent two adjusting-screws, one connected to the top of each of the hangers R<sup>3</sup>. Each of the adjusting-screws  $r$  passes through a screw-threaded collar  $r'$ , connected to the top of the frame of the machine. By means of the adjusting-screws  $rr$  and the screw-threaded collars  $r' r'$  the hangers R<sup>3</sup> can be raised or lowered vertically to accomplish the vertical adjustment of the parts carried by the said hangers.

$r'' r''$  represent two side bars carried by the hangers R<sup>3</sup>. Each of the side bars  $r'' r''$  is provided with longitudinal slots  $r^3$ , through each of which passes a bolt fitted with a thumb-nut S. By means of the slots  $r^3$  and bolts and thumb-nuts the side bars can be longitudinally adjusted to bring the parts carried by them into any predetermined position.

S' represents a drum mounted in suitable bearings S'', connected to the head of the side bars  $r'' r''$ , while S<sup>3</sup> represents a drum removably mounted in bearings s, connected to the side bars  $r'' r''$  vertically over the label-holder. Passing around the drums S' S<sup>3</sup> is a belt or series of belts S<sup>4</sup>, the purpose of which is to convey the cans from the paste-belt to the label-holder and turn the can while picking up its label.

$s^3 s^3$  represent bearing-boxes mounted on the side bars  $r''$  contiguous to the bearings s, and mounted in the bearing-boxes  $s^3$  is the cylinder T of a paste-brush T'. Supported by the side bars  $r''$ , contiguous to the paste-brush T', are two uprights T'', and carried by the uprights T'' is a supplemental paste-receptacle T<sup>3</sup>, vertically over the brush T'. Within the paste-receptacle T<sup>3</sup> is a reciprocating rod  $t$ , which projects through one end of the paste-receptacle T<sup>3</sup> and is fitted with a traveler  $t'$ , working in the groove  $t''$  of a cam  $t^3$ , rigidly mounted on the spindle of the paste-brush T'. In the bottom of the paste-receptacle T<sup>3</sup> are a series of perforations or holes U vertically over the paste-brush T', and connected to the reciprocating rod  $t$  are a series of brushes U', working on the bottom of the paste-receptacle and over the holes and perforations U. The purpose of the reciprocating rod and brushes U' is to force the paste through the holes and perforations onto the paste-brush. The purpose of the paste-



brush T' is to gum the lap of the label when picked up by the can. Mounted on the spindle of the drum S' is a pulley U'', and mounted on the spindle of the paste-brush T' is a pulley U<sup>3</sup>. Passing around the pulleys U'' U<sup>3</sup> is a belt u, by means of which motion is transmitted from the drum S' to the paste-brush.

u' represents a drum journaled in bearings u'', connected to the side bars r'' vertically over the foot of the label-holder.

u<sup>3</sup> represents a hollow drum mounted in suitable bearings connected to the foot of the side bars r''. Passing around the drums u' u<sup>3</sup> is a belt V, the purpose of which is to press together the can and its label after leaving the label-holder. The spindle V' of the drum u<sup>3</sup> is hollow and is connected with a steam-pipe V'' and with an exhaust-pipe V<sup>3</sup>. The purpose of this construction is to heat the drum U<sup>3</sup> and dry the belt V while the machine is at work. Mounted on the spindle of the drum u<sup>3</sup> is a pulley v, and mounted on the spindle of the drum F' is a pulley v'. Passing around the pulleys v v' is a belt v''. By means of the pulleys v v' and belt v'' motion is transmitted from the drum F' to the drum u<sup>3</sup>, and by means of the belt V motion is transmitted from the drum v<sup>3</sup> to the drum u'. Mounted on the spindle of the drum u' is a pulley v<sup>3</sup>, and mounted on the spindle of the drum S' is a pulley W. Passing around the pulleys v<sup>3</sup> and W is a belt W', by means of which motion is transmitted from the drum u' to the drum S', motion being transmitted from the drum S' to the paste-brush T'.

W'' represents an idler mounted in vertically-adjustable bearings W<sup>3</sup>, connected to the adjacent side of the frame A. The purpose of the idler W'' is to tighten the belt v''.

w represents a leaf, one end of which is hinged to the foot of the label-holder, while the opposite end is supported by springs w', connected to the end of the leaf and to the foot of the side bars r''. The purpose of this leaf is to allow of the easy delivery of the cans to the receptacle placed to receive them, and at the same time permit of the belt V pressing the label on the can during its passage along the raceway from the label-holder to the end of the leaf.

Mounted on the spindle of the drum F' is a pulley 4, and passing around the pulleys E and 4 is a belt 5. Mounted on the spindle of the drum d<sup>3</sup> is a pulley 6, by means of which motion is imparted to the machine. Extending rearwardly from each side of the hanger J'' is a lug 7, and journaled in the lugs 7 is a rock-shaft 8. Rigidly connected to the middle of the rock-shaft 8 is a lever 9, which extends on both sides of the rock-shaft. The end 9<sup>a</sup> is engaged by the arms M during the motion of the belt L<sup>3</sup>. The arms M when engaging the end 9<sup>a</sup> of the lever 9 trip the lever by pressing downward the said end and raising the opposite end. Adjustably connected to the end 9<sup>b</sup> of the lever 9 is a gate 10.

Formed in the gate 10 are two vertical slots 10<sup>a</sup>, through which pass adjusting-bolts 10<sup>b</sup>, connecting the gate 10 to the end 9<sup>b</sup> of the lever 9. The purpose of the gate 10 is normally to arrest the cans and prevent the can rolling to the pasting apparatus until the lever 9 has been engaged by one of the arms M, and the purpose of the vertical adjustment of the gate 10 is to gage the gate to the diameter of the cans to be labeled. Extending upwardly from each side of the lever 9 contiguous to the end 9<sup>b</sup> is a lug 11, in the upper end of which is formed a hole 12. Connected to the head of each of the side bars L is an extension 13, and rigidly fixed to the extension 13, immediately below the end 9<sup>b</sup> of the lever 9, is a cross-piece 14. Connected to the cross-piece 14 and to each of the lugs 11 is a spring 15 to draw downwardly the said end of the lever to bring the lower end of the gate 10 into engagement with the cans in the chute. Extending upwardly from the extension 13, immediately in front of the gate 10, are two lugs 16, and journaled in the lugs 16 is a rock-shaft 17. Rigidly connected to the rock-shaft 17 are two side rods 18, each extending rearwardly from the hole 12 in the lug 11 opposed to it. The engagement of the side rods 18 with the lugs 11 causes the rock-shaft 17 to move simultaneously with the rock-shaft 8, but in the opposite direction. Rigidly connected to the rock-shaft 17 is a forwardly-extending arm 19, and adjustably connected to the end of the arm 19 is a gate 20. To provide for the vertical adjustment of the gate 20, there is formed in it two vertical slots 21, and passing through each of the slots 21 is an adjusting-bolt 22, which enters the adjacent end of the arm 19. The gate 20 is in longitudinal alinement with the gate 10.

The purpose of this apparatus is to regulate the feed of the cans to the pasting and labeling apparatus. To explain its operation, we will assume that the machine is in motion. Each arm M during the revolution of the belt L<sup>3</sup> engages the adjacent end 9<sup>a</sup> of the lever 9 and lowers the end until the arm has cleared it, raising the opposite end 9<sup>b</sup> and gate 10. When the gate 10 has been raised, it permits the can located between the gates 10 and 20 to roll to the pasting apparatus, where it is engaged by one of the arms M and carried across the pasting apparatus. The upward movement of the end 9<sup>b</sup> of the lever 9 and the gate 10 causes the simultaneous movement of the adjacent ends of the side rods 18, lowering the opposite end of the side rods and rocking the shaft 17 to lower the end of the arm 19 and gate 20. This lowering movement of the gate 20 arrests the motion of all cans in front of the said gate 20 until the springs 15 have lowered the end 9<sup>b</sup> of the lever and gate 10 and raised the arm 19 and gate 20. The upward movement of the gate 20 permits a can to roll to the gate 10, where its further progress is arrested until the lever



9 has been again operated by one of the arms M. The distance between the gates 10 and 20 is preferably equal to the diameter of the cans to be labeled, and to provide for the adjustment of this distance it is advisable to connect the side rods to the rock-shaft 17 and arm 19 by means of the clamping-eyes 23.

The operation, briefly stated, is as follows: The machine having been set in motion from the drive-pulley 6, which is driven from any suitable source of power, the cans are placed on the inclined chute  $H^2$  and the lowermost can will rest against the lower gate 10. The arm M on belt  $L^3$  will strike the lever 9, which will raise the gate 10 and permit the can to roll down the table H to the paste-belt  $F''$ , the gate 20 descending in front of the column or line of cans as the gate 10 moved upwardly. As soon as the arm M passes the lever 9 the spring 15 will cause the gate 20 to rise and admit another can and the gate 10 to descend in front of said can, and so indefinitely. The can after reaching the paste-belt  $F''$  will be rolled over the upper run thereof between the rails  $m m'$  by the arm M, before described, and supplied with paste. In passing from the paste-belt  $F''$  the can will roll upon the two raised tracks  $R' R$  to prevent its paste from being removed, and from these tracks it will be carried by the belts  $S^4$  down upon the plates  $Q^2$  at the forward corners of the pile of labels. These plates will be depressed and allow the forward end of the label to be picked up by the pasted surface of the can, and as the latter is carried over the pile of labels by the belts the adhering label will be wrapped around the can by the rolling motion thereof. When the can reaches the brush  $T''$ , the lap at the rear end of the label will be gummed, after which the can will pass between the pressure-belt V and yielding leaf  $w$ , where the label will be pressed smoothly upon the can by the time the latter reaches the discharge end of said leaf.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a can-labeling machine, an endless traveling paste-belt having a longitudinal run to apply the paste to the cans, and a vertically-disposed run at its head end, of a vertically-disposed traveling paste-supply belt adjacent to the vertical run of the said paste-belt to supply paste thereto, and a paste-receptacle into which the lower end of said supply-belt extends.

2. The combination in a can-labeling machine with the main frame and a supplemental frame mounted in the head end thereof and means for raising and lowering the head end of the supplemental frame, of three triangularly-arranged rolls mounted in said supplemental frame, an endless paste-belt passed around said rolls with its longitudinal run in the path of the cans, a vertically-disposed

traveling paste and supply belt alongside of the vertical run of the paste-belt and also having rolls mounted in the supplemental frame, a paste-receptacle into which the lower end of the supply-belt extends, and means for adjusting the adjacent runs of the two belts toward and from each other.

3. The combination with the main frame, of a pivoted frame mounted therein and vertically adjustable at its head end to vary its inclination, a paste-belt having its rolls mounted in said pivoted frame, and a paste-supply for said belt carried by said pivoted frame, of vertically-adjustable hangers suspended from the main frame over the ends of the paste-belt, rolls journaled in said hanger, an endless can-feeding belt passed around said rollers and guide-rails mounted on the main frame and extending longitudinally over the paste-belt, and means for adjusting the rails for different sizes of cans.

4. In a can-labeling machine, a pasting apparatus consisting of a supplemental frame pivotally connected at one end to the main frame, means for adjusting the opposite end of the supplemental frame, to increase or diminish its inclination, a set of drums journaled in the supplemental frame, a paste-belt passing around the drums, a paste-dish carried by the supplemental frame, a second set of drums one of the said drums journaled in the said dish and the other in the supplemental frame, a supply-belt passing around the second set of drums, adapted to convey the paste from the paste-dish to the paste-belt, an idler engaging the outer surface of the supply-belt, an idler engaging the paste-belt, and a platform carried by the supplemental frame to receive the cans from the hopper and deliver them to the paste-belt, substantially as specified.

5. In a can-labeling machine, a label-holder consisting of an open bottom, laterally-adjustable sides composed of telescopic sections connected to the said bottom, and a head for the said sides, substantially as specified.

6. In a can-labeling machine a label-holder, consisting of an open bottom, laterally-adjustable sides composed of telescopic sections connected to the said bottom, a head for the said sides, and a door formed in one of the said sides, substantially as specified.

7. In a can-labeling machine, a label-holder consisting of an open bottom, laterally-adjustable sides composed of telescopic sections connected to the said bottom, a head for the said sides, a door formed in one of the said sides, and an adjusting-screw for moving the said sides toward or away from each other, substantially as specified.

8. In a can-labeling machine, a label-holder consisting of an open bottom, laterally-adjustable sides composed of telescopic sections connected to the said bottom, a head for the said sides, a door formed in one of the said sides, an adjusting-screw for moving the said sides



toward or away from each other, a sleeve depending from the under side of the false bottom, a column entering the said sleeve, a laterally-movable base for the said column, 5 spring-actuated rollers connected to the base, idlers connected to the under side of the open bottom, and cords connected to the spring-actuated rollers, passing around the idlers connected to the sleeve, to cause the elevation of the false bottom, substantially as specified. 10

9. In a can-labeling machine the combination of the pasting apparatus, a label-holder, a supplemental pasting apparatus to gum the 15 lap of the label, consisting of a paste-brush journaled above the label-holder, a paste-receptacle adapted to feed the paste-brush, a reciprocating brush within the paste-receptacle, and a traveler on the end of the shank of 20 the reciprocating brush, engaging a cam on the spindle of the supplemental paste-brush, substantially as specified.

10. In a can-labeling machine the combination of the pasting apparatus, a label-holder, 25 a supplemental pasting apparatus to gum the lap of the label, consisting of a paste-brush journaled above the label-holder, a paste-receptacle adapted to feed the paste-brush, a reciprocating brush within the paste-receptacle, a traveler on the end of the shank of the 30 reciprocating brush, engaging a cam on the spindle of the supplemental paste-brush, a conveyer to roll the cans from the primary pasting apparatus to the labels, and a presser-belt to press the label on the can, substantially as specified. 35

11. In a can-labeling machine the combination of the primary pasting apparatus, a label-holding receptacle, a platform interposed between the primary pasting apparatus and the 40 label-holder, and longitudinally and laterally adjustable tracks R' R' connected to the platform to receive the cans from the primary pasting apparatus, and deliver them at the 45 edge of the labels, substantially as specified.

12. In a can-labeling machine the combination of the raceway, a presser apparatus located above the raceway, consisting of two 50 vertically and longitudinally adjustable hangers, drums supported in the hangers, a belt passing around the drums, and a spring-supported hinged leaf at the delivery end of the raceway, substantially as specified.

13. In a can-labeling machine, a feed-regulator for the cans, consisting of a rock-shaft 55 8, a lever 9 connected to the rock-shaft 8, a gate 10 carried by the lever 9, a rock-shaft 17 connected with and operated by the action of the rock-shaft 8, and a gate 20 carried by the 60 rock-shaft 17, substantially as specified.

14. In a can-labeling machine a feed-regulator for the cans, consisting of a rock-shaft 8, a lever 9 carried by the rock-shaft 8 and operated by the action of the can-conveyer, a 65 gate 10 connected to the lever 9, a rock-shaft 17 having a rod 18 operated by the action of

the rock-shaft 8, and a gate 20 carried by the rock-shaft 17, substantially as specified.

15. In a can-labeling machine a feed-regulator for the cans consisting of a rock-shaft 70 8, a lever 9 carried by the rock-shaft 8 and operated by the action of the can-conveyer, a vertically-adjustable gate 10 connected to the forward end of the lever 9, a rock-shaft 17, longitudinally-adjustable side rods 18 connected to the rock-shaft 17 and to the lever 9, 75 an arm 19 connected to the rock-shaft 17, and a vertically-adjustable gate 20 carried by the forward end of the arm 19, substantially as specified. 80

16. In a can-labeling machine a feed-regulator for the cans consisting of a rock-shaft 8, a lever 9 carried by the rock-shaft 8 and operated by the action of the can-conveyer, a vertically-adjustable gate 10 connected to the 85 forward end of the lever 9, a rock-shaft 17, longitudinally-adjustable side rods 18 connected to the rock-shaft 17, and to the lever 9, an arm 19 connected to the rock-shaft 17, a vertically-adjustable gate 20 carried by the 90 forward end of the arm 19, and springs to return the lever and correlative parts to their normal position after being actuated, substantially as specified.

17. The combination with the chute, the 95 paste-belt and the can-conveying belt mounted thereabove and provided with transverse arms to engage the cans and move them over the paste-belt, of oppositely-operating gates located one in advance of the other for controlling the feed of the cans and provided 100 with an operating device located in the path of the belt-arms and to be operated thereby.

18. A can-labeling machine comprising a frame, a can-chute at the head thereof, a 105 gate mechanism over the chute in the path of the cans, a pasting mechanism to which the chute delivers, a can-conveyer belt over the paste mechanism and provided with means for actuating the said gate mechanism, a label-holder at the rear end of the paste-mechanism, a supplemental pasting mechanism at 110 the rear end of the label-holder and a pressing device in rear of said supplemental pasting mechanism. 115

19. The combination with the can-chute, and the pasting mechanism, of a vertically-adjustable frame above the pasting mechanism, a can-conveying belt and gate mechanism mounted in said frame and adjustable as 120 a whole toward and from the pasting mechanism and chute, the said can-conveying belt having means for actuating the gate mechanism to release one can at a time.

20. A can-labeling machine comprising, the 125 frame having adjustable sides, the longitudinally-extending paste-belt at the lower end of the chute, a can-conveying belt over the paste-belt, a label-holder beyond the lower ends of the said two belts and having adjustable sides, a table between the said holder 130 and the lower end of the paste-belt, adjust-



able tracks mounted on said table, a leaf at the rear of the label-holder, laterally-adjustable guide-rails extending from the lower ends of the sides of the can-chute over the  
5 paste-belt, label-holder, and leaf, an endless belt over the label-holder, a supplemental pasting mechanism at the rear end of said belt and over the rear end of the label-holder

and a presser-belt over said leaf and in rear of said supplemental pasting mechanism.

Toronto, February 16, A. D. 1897.

JOHN L. BARKEY.

In presence of—

MAUDE A. WESTWOOD,  
C. H. RICHES.